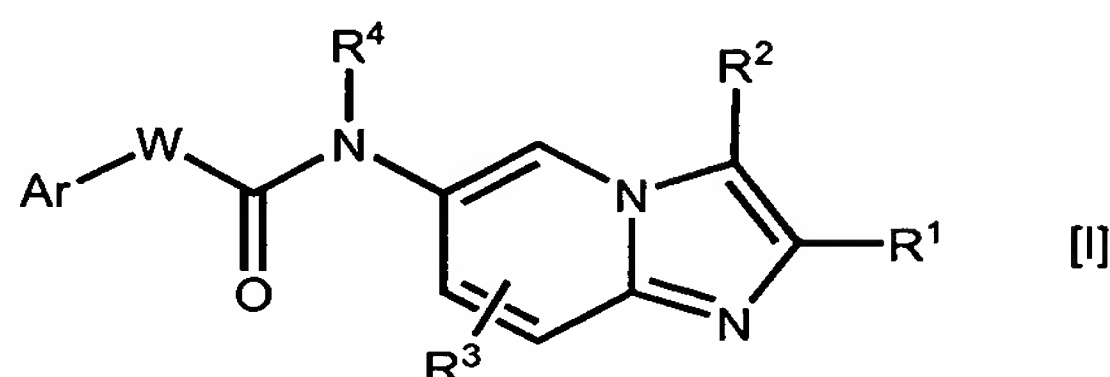


IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19 (canceled).

Claim 20 (new). A compound of formula [I]



wherein:

each  $R^1$  and  $R^2$  are independently selected from the group consisting of:

- (1) hydrogen
- (2) halogen
- (3)  $C_{1-6}$  alkyl
- (4)  $C_{3-8}$  cycloalkyl- $C_{0-4}$  alkyl
- (5)  $C_{1-6}$  alkylamino
- (6) di- $C_{1-6}$  alkylamino
- (7)  $C_{1-6}$  alkylcarbonylamino
- (8)  $C_{1-6}$  alkylcarbonyl-( $C_{1-6}$  alkyl)amino, and
- (9) 3 to 8-membered heterocycloalkyl- $C_{0-4}$  alkyl,

wherein the  $C_{1-6}$  alkyl moiety may be substituted with  $R^5$ , the cycloalkyl or heterocycloalkyl moiety may be substituted with  $R^6$ , and  $R^1$  and  $R^2$  are not hydrogen at the same time, or

$R^1$  and  $R^2$  together form  $-(CH_2)_m-$ , m standing for an integer of 3 – 6, wherein 1 or 2 hydrogen atoms constituting methylene may be substituted with  $R^6$ ;

$R^3$  is hydrogen, halogen,  $C_{1-6}$  alkyl or  $C_{1-6}$  alkyloxy;

$R^4$  is hydrogen or  $C_{1-6}$  alkyl;

each  $R^5$  is independently selected from the group consisting of halogen, cyano, hydroxyl, amino, optionally fluorine- or hydroxyl-substituted  $C_{1-6}$  alkyl, mono- $C_{1-6}$  alkylamino, di- $C_{1-6}$  alkylamino, optionally fluorine-substituted  $C_{1-6}$  alkyloxy,  $C_{1-6}$  alkyloxy- $C_{1-6}$  alkyl,  $C_{1-6}$  alkyloxycarbonyl,  $C_{1-6}$  alkyloxy- carbonylamino,  $C_{1-6}$  alkyloxycarbonyl-( $C_{1-6}$  alkyl)amino,  $C_{1-6}$  alkylcarbonyl,  $C_{1-6}$  alkylcarbonyloxy,  $C_{1-6}$  alkylcarbonylamino,  $C_{1-6}$  alkylcarbonyl-( $C_{1-6}$  alkyl)amino, carbamoyl, mono- $C_{1-6}$  alkylcarbamoyl, di- $C_{1-6}$  alkylcarbamoyl, carbamoylamino, mono- $C_{1-6}$  alkylcarbamoylamino, di- $C_{1-6}$  alkylcarbamoylamino, mono- $C_{1-6}$  alkylcarbamoyl-( $C_{1-6}$  alkyl)amino, di-

C<sub>1-6</sub> alkylcarbamoyl-(C<sub>1-6</sub> alkyl)amino, carbamoyloxy, mono-C<sub>1-6</sub> alkylcarbamoyloxy, di-C<sub>1-6</sub> alkylcarbamoyloxy, C<sub>1-6</sub> alkylsulfonyl, C<sub>1-6</sub> alkylsulfonylamino, C<sub>1-6</sub> alkylsulfonyl-(C<sub>1-6</sub> alkyl)amino, sulfamoyl, mono-C<sub>1-6</sub> alkylsulfamoyl, di-C<sub>1-6</sub> alkylsulfamoyl, sulfamoylamino, mono-C<sub>1-6</sub> alkylsulfamoylamino, di-C<sub>1-6</sub> alkylsulfamoylamino, mono-C<sub>1-6</sub> alkylsulfamoyl-(C<sub>1-6</sub> alkyl)amino, di-C<sub>1-6</sub> alkylsulfamoyl-(C<sub>1-6</sub> alkyl)amino and pyridone;

R<sup>6</sup> is R<sup>5</sup> or oxo;

W is:

- (1) linker (single bond),
- (2) mono- or bi-cyclic, 3 to 8-membered aromatic or aliphatic heterocyclic group,
- (3) mono- or bi-cyclic, 3 to 8 membered aromatic or aliphatic carbocyclic group,
- (4) C<sub>2-4</sub> alkylene in which the carbon in the main chain may be substituted with oxygen, or
- (5) C<sub>2-4</sub> alkenylene in which the carbon in the main chain may be substituted with oxygen,

wherein those substituents in above (2) through (5) may be optionally substituted with R<sup>5</sup>; and

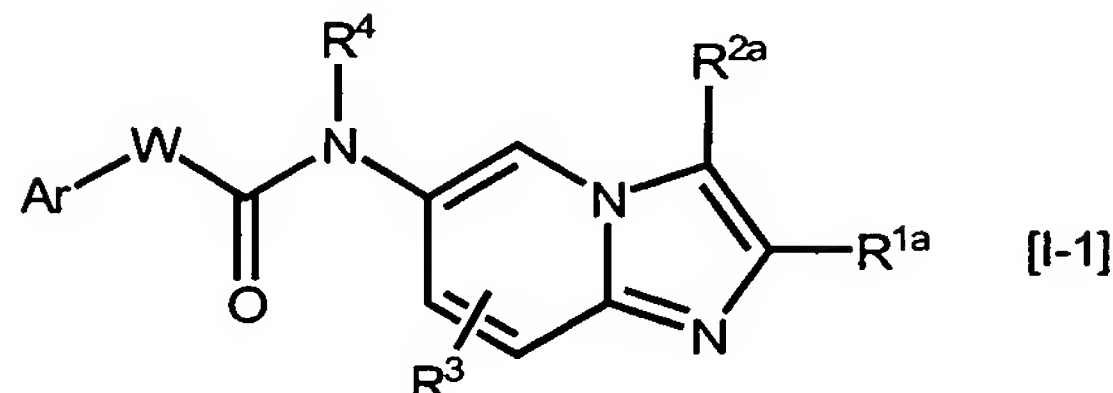
Ar is an optionally R<sup>7</sup>-substituted aromatic carbocyclic group or aromatic heterocyclic group, said aromatic carbocyclic group or aromatic heterocyclic group selected from the group consisting of:

- (1) phenyl,
- (2) naphthyl,
- (3) pyridinyl,
- (4) pyrimidinyl,
- (5) pyridazinyl,
- (6) pyrazyl,
- (7) pyrazole,
- (8) pyrrolyl,
- (9) imidazolyl,
- (10) triazolyl,
- (11) oxazolyl,
- (12) isoxazolyl,
- (13) oxadiazolyl,
- (14) thiazolyl,
- (15) isothiazolyl,
- (16) thiadiazolyl, and
- (17) tetrazolyl;

wherein R<sup>7</sup> is selected from R<sup>5</sup>;

or a pharmaceutically acceptable salt thereof.

Claim 21 (new). The compound according to Claim 20 of formula [I-1]



wherein:

R<sup>1a</sup> and R<sup>2a</sup> are each independently selected from the group consisting of:

- (1) hydrogen,
- (2) halogen,
- (3) C<sub>1-6</sub> alkyl,
- (4) C<sub>3-8</sub> cycloalkyl-C<sub>0-4</sub> alkyl,
- (5) C<sub>1-6</sub> alkylamino,
- (6) di-C<sub>1-6</sub> alkylamino,
- (7) C<sub>1-6</sub> alkylcarbonylamino,
- (8) C<sub>1-6</sub> alkylcarbonyl-(C<sub>1-6</sub> alkyl)amino, and
- (9) 3 to 8-membered heterocycloalkyl,

wherein the C<sub>1-6</sub> alkyl moiety may be substituted with R<sup>5a</sup>, the cycloalkyl or heterocycloalkyl moiety may be substituted with R<sup>6</sup>, and R<sup>1a</sup> and R<sup>2a</sup> are not hydrogen at the same time, or

R<sup>1a</sup> and R<sup>2a</sup> together form -(CH<sub>2</sub>)<sub>m</sub>-, wherein m is an integer from 3 to 6, and wherein 1 or 2 hydrogen atoms constituting methylene may be substituted with R<sup>6</sup>;

each R<sup>5a</sup> is independently selected from the group consisting of halogen, cyano, hydroxyl, optionally fluorine- or hydroxyl-substituted C<sub>1-6</sub> alkyl, optionally fluorine-substituted C<sub>1-6</sub> alkyloxy, C<sub>1-6</sub> alkyloxy-C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkyloxycarbonyl, C<sub>1-6</sub> alkyloxy-carbonylamino, C<sub>1-6</sub> alkyloxycarbonyl-(C<sub>1-6</sub> alkyl)amino, C<sub>1-6</sub> alkylcarbonyl, C<sub>1-6</sub> alkylcarbonyloxy, C<sub>1-6</sub> alkylcarbonylamino, C<sub>1-6</sub> alkylcarbonyl-(C<sub>1-6</sub> alkyl)amino, carbamoyl, mono-C<sub>1-6</sub> alkylcarbamoyl, di-C<sub>1-6</sub> alkylcarbamoyl, carbamoylamino, mono-C<sub>1-6</sub> alkylcarbamoylamino, di-C<sub>1-6</sub> alkylcarbamoylamino, mono-C<sub>1-6</sub> alkylcarbamoyl-(C<sub>1-6</sub> alkyl)amino, di-C<sub>1-6</sub> alkylcarbamoyl-(C<sub>1-6</sub> alkyl)amino, carbamoyloxy, mono-C<sub>1-6</sub> alkylcarbamoyloxy, di-C<sub>1-6</sub> alkylcarbamoyloxy, C<sub>1-6</sub> alkylsulfonyl, C<sub>1-6</sub> alkylsulfonylamino, C<sub>1-6</sub> alkylsulfonyl-(C<sub>1-6</sub> alkyl)amino, sulfamoyl, mono-C<sub>1-6</sub> alkylsulfamoyl, di-C<sub>1-6</sub> alkylsulfamoyl, sulfamoylamino, mono-C<sub>1-6</sub> alkylsulfamoylamino, di-C<sub>1-6</sub> alkylsulfamoylamino, mono-C<sub>1-6</sub> alkylsulfamoyl-(C<sub>1-6</sub> alkyl)amino, di-C<sub>1-6</sub> alkylsulfamoyl-(C<sub>1-6</sub> alkyl)amino and pyridone, and

R<sup>3</sup>, R<sup>4</sup>, R<sup>6</sup>, W and Ar are as defined in Claim 20

or a pharmaceutically acceptable salt thereof.

Claim 22 (new). The compound according to Claim 20, wherein R<sup>1</sup> is C<sub>1-6</sub> alkyl, C<sub>1-6</sub> cycloalkyl, C<sub>1-6</sub> alkylamino, di-C<sub>1-6</sub> alkylamino or C<sub>1-6</sub> alkylcarbonyl-(C<sub>1-6</sub> alkyl)amino, or a pharmaceutically acceptable salt thereof.

Claim 23 (new). A compound according to Claim 20, wherein R<sup>2</sup> is hydrogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> cycloalkyl, C<sub>1-6</sub> alkylamino, di-C<sub>1-6</sub> alkylamino or C<sub>1-6</sub> alkylcarbonyl- (C<sub>1-6</sub> alkyl)amino, or a pharmaceutically acceptable salt thereof.

Claim 24 (new). A compound according to Claim 21, wherein R<sup>1a</sup> is C<sub>1-6</sub> alkyl, C<sub>1-6</sub> cycloalkyl, C<sub>1-6</sub> alkylamino, di-C<sub>1-6</sub> alkylamino or C<sub>1-6</sub> alkylcarbonyl-(C<sub>1-6</sub> alkyl)- amino, or a pharmaceutically acceptable salt thereof.

Claim 25 (new). A compound according to Claim 21, wherein R<sup>2a</sup> is hydrogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> cycloalkyl, C<sub>1-6</sub> alkylamino, di- C<sub>1-6</sub> alkylamino or C<sub>1-6</sub> alkylcarbonyl-(C<sub>1-6</sub> alkyl)- amino, or a pharmaceutically acceptable salt thereof.

Claim 26 (new). A compound according to Claim 20, wherein the 3 to 8-membered heterocycloalkyl moiety is selected from the group consisting of tetrahydrofuranyl, tetrahydropyranyl, pyrrolidinyl and piperidinyl.

Claim 27 (new). A compound according to Claim 20, wherein R<sup>3</sup> is hydrogen, methyl or methoxy, or a pharmaceutically acceptable salt thereof.

Claim 28 (new). A compound according to Claim 20, wherein R<sup>4</sup> is hydrogen or methyl, or a pharmaceutically acceptable salt thereof.

Claim 29 (new). A compound according to Claim 20, wherein W is selected from the group consisting of 1,2-dimethylene, 1,4-phenylene, 2-fluoro-1,4- phenylene, pyridin-2,5-di-yl, pyrimidin-2,5-di-yl, pyrazin-2,5-di-yl, 1,4-piperidin-di-yl, 1,2,4-triazol-1,3-di-yl, 1,4-cyclohexylene and oxymethylene, or a pharmaceutically acceptable salt thereof.

Claim 30 (new). A compound according to Claim 20, in which Ar is selected from the group consisting of pyrrol-1-yl, phenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 4-chlorophenyl, 3,4-difluorophenyl, 2,4-difluorophenyl, 2-trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 4-methoxyphenyl, 4-methanesulfonylphenyl, pyridin-2-yl, 3-methylpyridin-6-yl, 2-fluoropyridin-5-yl, 3-fluoropyridin- 6-yl, 3-chloropyridin-6-yl, 2-difluoromethylpyridin-5-yl, 3-difluoromethylpyridin-6-yl, 2-methoxypyridin-5-yl, 2-methoxypyridin- 6-yl, 3-methoxypyridin-6-yl,

2-difluoromethoxypyridin-5-yl, 3-difluoromethoxypyridin-6-yl, 3-trifluoromethylpyridin-6-yl, 2-trifluoromethylpyridin-5-yl, 2-pyrimidinyl, 2-pyrazinyl and 3-pyridazinyl, or a pharmaceutically acceptable salt thereof.

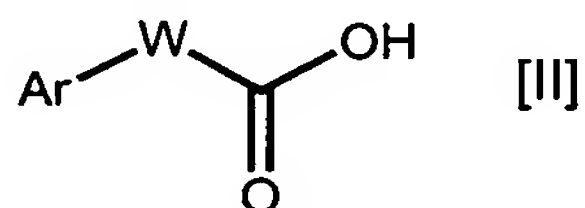
Claim 31 (new). A compound according to Claim 20, which is N-(2,3-dimethylimidazo[1,2-a]pyridin-6-yl)-4'- (trifluoromethyl)[1,1'-biphenyl]-4-carboxamide, or a pharmaceutically acceptable salt thereof.

Claim 32 (new). A compound according to Claim 20, which is N-(2-cyclopropyl-3-methylimidazo[1,2-a]- pyridin-6-yl)-4-(2-pyridyl)benzamide, or a pharmaceutically acceptable salt thereof.

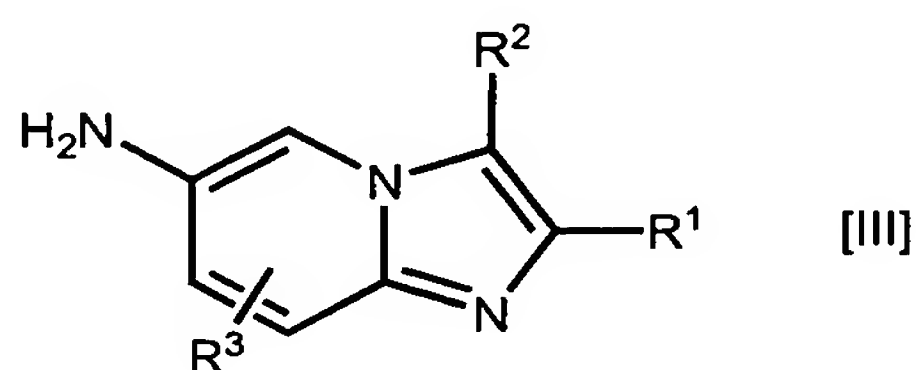
Claim 33 (new). A compound according to Claim 20, which is N-(2-cyclopropyl-3-methylimidazo[1,2-a]pyridin- 6-yl)-4-(1H-pyrro-1-yl)benzamide, or a pharmaceutically acceptable salt thereof.

Claim 34 (new). A method for producing a compound according to Claim 20 of formula [I] which comprises the steps of:

(1) amidating a compound represented by a general formula [II]:



wherein Ar and W are as defined in Claim 20,  
with a compound represented by a general formula [III]



wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are as defined in Claim 20;  
and

(2) condensing, where R<sup>4</sup> is not hydrogen, the compound as obtained in the above step with a compound represented by a general formula [IV]



wherein  $X_1$  is a leaving group and  $R^4$  is defined in Claim 20.

Claim 35 (new). The method of treating a disease mediated by the melanin concentrating hormone receptor comprising administering to a patient in need of such treatment a therapeutically effective amount of a melanin concentrating hormone receptor antagonist compound according to Claim 20, or a pharmaceutically acceptable salt thereof.

Claim 36 (new). The pharmaceutical composition comprising a compound according to Claim 20, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

Claim 37 (new). The method of treating or preventing a melanin concentrating hormone mediated disease selected from: metabolic disorders represented by obesity, diabetes, hormone disorder, hyperlipidemia, gout, fatty liver, hepatitis and cirrhosis; cardiovascular disorders represented by stenocardia, acute or congestive heart failure, myocardial infarction, coronary atherosclerosis, hypertension, renal diseases and electrolyte abnormality; central nervous system or peripheral nervous system disorders represented by bulimia, emotional disturbance, depression, anxiety, epilepsy, delirium, dementia, schizophrenia, attention-deficit hyperactivity disorder, memory impairment, sleep disorders, cognitive failure, dyskinesia, paresthesias, smell disorders, morphine tolerance, drug dependence and alcoholism; reproductive disorders represented by infertility, preterm labor and sexual dysfunction; digestive disorders; respiratory disorders; cancer or pigmentation, comprising administering to a patient in need of such treatment or prophylaxis of a therapeutically or prophylactically effective amount of a compound according to Claim 20, or a pharmaceutically acceptable salt thereof.

Claim 38 (new). The method of preventing or treating obesity in a patient in need thereof comprising administering to said patient a therapeutically or prophylactically effective amount of a compound according to Claim 20, or a pharmaceutically acceptable salt thereof.